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ABSTRACT

A technology for preventing degradation of a hydrogen permeable metal layer in a fuel cell 210 is provided. A fuel cell system 200 including a fuel cell 210 with an anode which has the hydrogen permeable metal layer comprises a fuel cell controller 230 for controlling the operation status of the fuel cell system 200, a temperature parameter acquisition section for acquiring a temperature parameter of the hydrogen permeable metal layer, and a hydrogen permeable metal layer degradation prevention section which reduces the hydrogen partial pressure in an anode channel 212 for supplying fuel gas to the anode. If a temperature of the hydrogen permeable metal layer represented by the temperature parameter deviates from a specified temperature range, the fuel cell controller 230 cause the hydrogen permeable metal layer degradation prevention section to operate for preventing degradation of the hydrogen permeable metal layer.